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## **The evidence base for art therapy with parent and infant dyads: An integrative literature review**

**V. G. Armstrong and J Ross**

### **Abstract:**

We aimed to evaluate the existing evidence base for the efficacy of art therapy with parent-infant dyads. We undertook an integrative review, following the PRISMA protocol, systematically searching 4 electronic databases, and grey literature, for papers describing art therapy with parents and infants together. 14 papers were identified for inclusion. These were evaluated for quality, data was synthesised for evidence of change, and we undertook a narrative synthesis of intervention model and thematic analysis drawing together mechanisms of change within the art therapy process. Papers described a group approach to art therapy and contained a mixture of methodological approaches. Themes highlighted the beneficial aspects of the art therapy process that might be common to group psychotherapy approaches and those which were unique to art making, such as the qualities of the materials, the making process and the final art works. The themes identified provide a basis for further research into mechanisms of change within parent-infant art therapy. Those papers which presented quantitative evidence demonstrated promising evidence for the value of art therapy but we identify the need for larger participant numbers and control measures, for this evidence to confidently state the impact of art therapy.

### **Plain Language Summary:**

This paper is based on a review of the current evidence for an art therapy approach to working with parents and their infants together. We searched data bases and other online sources and put out calls

for unpublished work to art therapy organisations. We looked for art therapy for parents together with their 0-3s and this could be with the individual pairs or with groups. We reviewed the papers we found and 14 were included in the final stage of this review.

We have compared their models for art therapy work and their results and we have also looked for the common themes about why art therapy seems to be helping in order to provide a solid basis for future research in this area. We think there is promising early evidence that art therapy can help parents and infants in a number of areas, such as building the parent-infant relationship and improving parental well-being but this research highlights the need for further, larger scale and controlled studies.

**Key Words:** Art Therapy, parent, infant, dyadic, review

## **Background**

The quality of loving bond between caregivers and their infants in the first three years of life lays the foundations for social, emotional, and biological development. The positive impact of warm, reciprocal interactions on the infant's emotional well-being, capacity to regulate, sense of self, brain development and future relationships has been well documented (Svanberg 1998, Schore 2001). Given that poor attachment relationships are associated with poor life outcomes (Belsky 2001) the development of interventions that can promote positive attachments at an early stage is crucial. Dyadic parent-infant approaches within psychotherapy have been developed, focusing on developing parental responsiveness and attunement (Baradon, 2005) with a review in 2015 finding positive outcomes from

parent-infant psychotherapy (Barlow, Bennett, Midgley, Larkin, & Wei, 2015). Within the UK, art therapy is widespread (British Association of Art Therapists, 2019) and increasingly used as a dyadic intervention (Taylor Buck, Dent-Brown, & Parry, 2013). Parent-infant work specifically is nascent. This approach involves shared engagement in art making between parent and infant within a therapeutic setting and supported by an art therapist. This may be within a group format or with individual dyads and the therapist may take a directive or non-directive stance, for example, by planning specific activities to address particular outcomes or by providing materials and encouraging parents to follow the infant's lead. An art therapy approach is theoretically ideal for supporting early relationships as the experience of trying new materials allows the therapist to support the parent in regulating and attuning with the infant's aims and feelings, and it may facilitate positive touch and sensory experiences. However, a review of the existing literature is required in order to gain a picture of the efficacy of art therapy practice with parent-infant dyads. Previous reviews have focused on interventions targeting post-partum mothers (Hogan, Sheffield and Woodward, 2017), however this review is the first to focus on art therapy with parents and infants together, as well as the first to take a systematic and comprehensive approach. Our aims are two-fold; to assess the evidence for change brought about by parent-infant art therapy, and to provide a thematic analysis highlighting those aspects of this intervention that appear to be creating change for the participants.

## **Method**

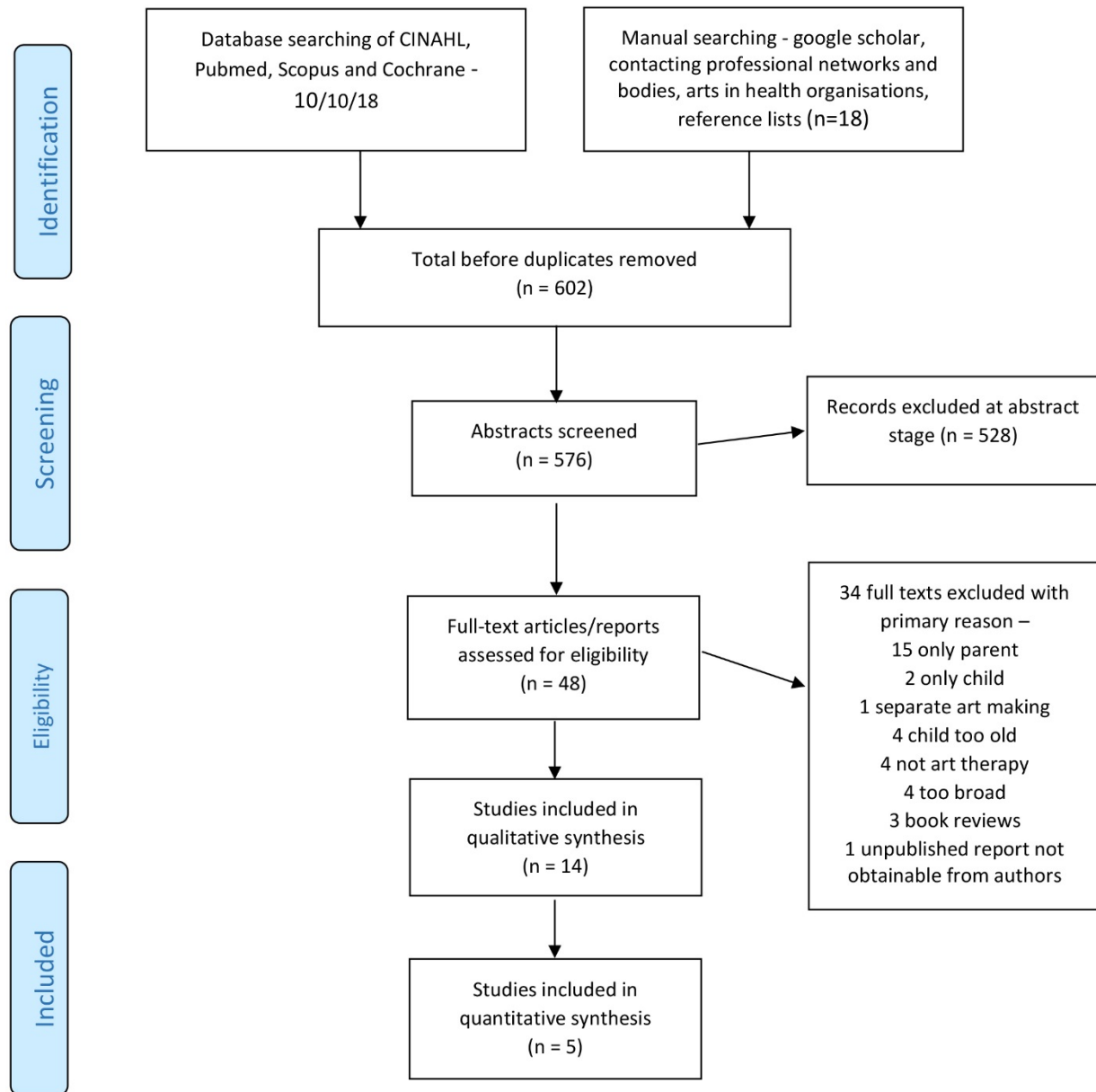
This review took an integrative approach, following the model set out by Whitemore & Knafl (2005). Early scoping of the literature indicated that the parent-infant art therapy literature was scarce. It included few quantitative studies and, far more articles taking qualitative approaches, many of which were not outcome focused, such as descriptive case studies connecting to theory. As such, integrative review is particularly suited to drawing together the diverse methodologies in a systematic manner (Broome, 1993) including theoretical literature as well as experimental and non-experimental research.

Figure 1 gives full details of the literature search which followed the PRISMA guidance (Moher, Liberati, Tetzlaff & Altman, 2009). Inclusion criteria were that papers describe art therapy for parents to attend together with their infant (defined as under 3 years of age). Studies had to include the parent and infant working together as a dyad within the art therapy process, as opposed to being targeted separately. Within these criteria, we chose to remain as broad as possible, not excluding based on date, including interventions with individual dyads or with groups of dyads, in any service context, and defining parents as any primary care giver (mother, father, kinship carer or foster parent). Studies were not excluded based on quality, but a post-hoc assessment of study quality was made for each study and summarised in the results. Studies required an abstract available in English and we then sought translation of the full papers.

A data base search was conducted using the terms (art therapy OR art psychotherapy) AND (parents OR carers OR mothers OR dyads OR infants OR babies OR early years) as well as grey searches. Where texts were borderline for inclusion these were discussed by the authors and consensus reached (excluded papers and borderline decisions can be found in the additional material online in appendix 1 and 2)

[insert Fig 1 here]

Figure 1: Prisma flow diagram of search process



#### Included papers

14 papers were included following review (table 1), all describing group work, although this was not a requirement for inclusion. Five describe the practice of parent-infant art therapy groups, sometimes with vignettes of case material. One is a practice manual for an approach to dyadic work describing

group formats and directives. Within the qualitative approaches to research there is a single case study set within the context of a group and two describing the same research study taking ethnographic approach. Five research papers integrate quantitative measures with qualitative case descriptions. One of these describes a participative arts approach rather than art therapy but after discussion it was agreed to include this as the team included mental health workers with artists so was felt to be comparable and relevant (see online appendix 2).

[insert Table 1]

Table 1: Texts included in final stage of review

Paper	Methodology	Research Context	Measures/research
<b>Descriptions of groups linked to theory</b>			
Hall (2008). Painting together: An art therapy approach to mother-infant relationships.	Description of art therapy group linking back to theory. Explanation of the approaches development by the author through a number of group settings. Case examples illustrate process.	Closed mother and infant art therapy group in a UK Sure Start centre. Author runs group	3 vignettes of clinical cases describing changes across the process of increasing confidence, lessening of complex ambivalence to a baby, learning to be less intrusive and allow imperfections, and managing to be separate.
Hosea (2017). Amazing Mess: Mothers get in touch with their infants through the vitality of painting together.	Description of art therapy group detailing links to attachment, repair of relationships, transference processes and building maternal sensitivity.	A parent-infant art therapy group in a Sure start centre in an area of high deprivation in the UK Author runs group	4 vignettes of clinical cases written as snap shots of a moment in therapy, with commentary to add the insight of therapeutic perspective on the moment.
Parashak (2008). Object relations and attachment theory: Creativity of Mother and Child in the Single Parent Family.	Description of short dyadic Art Therapy group for teen mothers and within a book chapter discussing object relations and attachment theory.	US programme run by local art therapy training course in conjunction with Head start The author is teacher/supervisor of art therapy students running the groups	Group case discussion
Proulx (2000). Container, contained, containment: group art therapy with toddlers 18 to 30 months and their parent.	Qualitative description of group work with the specific theme of containment, with a case example using a collage intervention	Canadian joint parent-child art therapy intervention programme Author role not stated	Case example as illustration and dyad described as finding containment and predictability, becoming more comfortable with process
Proulx (2002). Strengthening ties, parent-child-dyad: group art therapy with toddlers and parents.	Description linked to theory of an art therapy group for parent-infant dyads.	Montreal Children's Hospital Canada. Author role not stated	5 vignettes of case examples Improving reciprocal communication, limit setting, lessening of inhibition, changes in behaviours
<b>Manual/practice guide</b>			
Proulx (2003). Strengthening emotional ties through parent-child dyad art therapy:	Hand book of parent-child art therapy intervention, including infants. Explains the development of the model from attachment theory, parent-child psychotherapy approaches, and the theory of children's	Variety of intervention settings in Canada, Montreal children's hospital, Family infant team, preschool day treatment centre and in Kindergartens	16 examples where techniques are described in vignettes of a clinical example

interventions with infants and preschoolers.	normal artistic development. Sections linking to theory, as well as manualised descriptions of interventions.		
<b>Case study</b>			
Meyerowitz-Katz (2017). The crisis of the cream cakes: An infant's food refusal as a representation of intergenerational trauma.	Single case study in context of a therapeutic playgroup using art therapy	An NHS child and adolescent mental health service in the UK which serves a multicultural urban area with a multidisciplinary team. Author is art therapist in the team.	Detailed qualitative single case study following a 20-month-old boy refusing food and mother presenting as anxious, 'teaching' not following child. The case study shows the child becoming healthy and able to eat and how this connected to the process in the group of repairing the dynamic between him and his mother.
<b>Other qualitative</b>			
Hosea (2006). "The Brush's Footmarks": Parents and infants paint together in a small community art therapy group.	An ethnographic and participative approach using video made of the interaction between parents and infants while making art within a community art therapy group as a starting point for interviews with mothers.	Open art therapy group run in an NHS baby clinic in the UK Groups run by author	Video of moments captured within therapy process used as a start point for interviews with 6 parents. Transcribing these and reflexively looking for themes. Vignettes from 3 dyads of the moments captured in video and of the responses to this in interviews. N=6
Hosea (2011). The brush's foot marks: Researching a small community art therapy group.	As above with additional detail about the development of research process	As above	As above with additional detail on the process of arriving at themes. Gives examples of mother's responses.
<b>Quantitative and qualitative</b>			
Armstrong, Dalinkeviciute, & Ross (2019) A Dyadic Art Psychotherapy Group for Parents and Infants – Piloting Quantitative Methodologies for Evaluation	Pilot study of parent-infant art therapy group using qualitative and quantitative measures and an observational tool – follows on from study below, piloting the measures used for evaluation, particularly the development of an observational tool suited to application to the group work.	Community based parent-infant art therapy groups set up with the local early years' partnership in a rural area of the UK where other services are limited. 1 <sup>st</sup> author runs groups, 2 <sup>nd</sup> and 3 <sup>rd</sup> psychology researchers	Quantitative measures pre and post intervention. Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) Mothers' Object Relations Scale Short Form (MORS-SF) Observational tool measuring duration of markers of synchronous communication in 1 <sup>st</sup> and last sessions N=10 dyads (from 2 groups)
Armstrong & Howatson (2015). Parent-infant art psychotherapy: a creative dyadic approach to early intervention.	Pilot study evaluation of two parent-infant art therapy groups	Community based parent-infant art therapy groups set up with the local early years' partnership in a rural area of the UK. Authors are art therapist and co-facilitator	Non-standardised pre and post survey about how mother views relationship and qualitative analysis of case material with vignettes of 3 cases. N=11 dyads (from 2 groups)
Arroyo & Fowler (2013). Before and after: A mother and infant painting group.	Evaluation of parent-infant art therapy group using quantitative measures (based on reports made for the Sure start centre where it was based)	Art therapy group run in a Welsh Sure Start centre – article arose from a service review 1 <sup>st</sup> author runs groups.	Quantitative and qualitative measures -Edinburgh postnatal depression scale -Self report measures of confidence and self esteem -"Soft outcomes universal learning" applied to 5 of the government Getting it Right for Every Child (GIRFEC) outcomes - and case descriptions from therapists N = 3 mothers and 1 father (attending together with one of the mothers).
Black, Ellis, Harris, Rooke, Slater & Cuch (2015). Making it Together: An evaluative study of Creative Families an arts and mental health partnership between the South London Gallery and the Parental Mental Health Team.	Report on a participative arts project for families of young children. Two different research approaches (reflected in two separately authored sections to the report) as evaluated in partnership between the South London & Maudsley NHS Trust Centre for Parent and Child Support, focusing on clinical outcomes, and the Centre for Urban and Community Research at Goldsmiths looking at qualitative outcomes.	A participative arts project in Southwark, London. Funded by Guy and St Thomas' charitable trust and run as a collaboration between Southwark's Parental Mental Health team and the South London Gallery. Researchers doing evaluations are external to the project but integral from the start.	Clinical outcomes using; -Depression, Anxiety and Stress scale (DASS) -The Parent-Infant Relationship Global Assessment Scale (PIRGAS) -The General Self-efficacy scale (GSES) -The Brief Infant Toddler Social and Emotional Assessment (BITSEA) -Semi-structured interviews with a small group of participants Qualitative approaches used an ethnographic methodology to draw together themes from participant observation at 26 sessions, session logs, workshops following the project, interviews with staff team and attending meetings throughout the process.



Lavey-Khan & Reddick (unpub) Painting Together: A Dyadic Art Therapy Group.	Unpublished manuscript looking at a pilot of a parent-infant art therapy group with a slow, open format with evaluations using self-report quantitative measures and qualitative case description.	A joint project between CAHMS services and a nursery/children's centre setting within a London borough. Authors are co-facilitators of the group.	N=36 (from 46 parents and 61 children who part) Quantitative measures -Parent Health Questionnaire 9 (PHQ- 9) - self-rated measure of DSM-IV symptoms of depression -Generalised Anxiety Disorder Questionnaire (GAD-7) -Parenting Stress Index Short Form 4 -Goals measure - parent-developed set of goals, self-rated 0-10. -and case descriptions from the therapists N=6 dyads
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### Data evaluation and analysis

Whittemore & Knafl, (2005) describe the balance between using broad criteria of quality and risking losing specificity or using specific criteria relevant to each methodology and risking complicating the data. We evaluated all papers using the checklist suggested by Stiles (1999) for qualitative material, with scores calculated pro rata as some factors being evaluated were not relevant where papers were not explicitly research. Issues arising in evaluations are discussed. We added additional criteria specific to our review, asking whether there was sufficient information about the model of intervention for this to be replicable and whether there was clarity about how the art process was taking place within the intervention. These questions are important in being able to learn from the interventions described for future practice. Where papers incorporated a research design including quantitative data we have used the additional criteria of the Quality Assessment Tool for Quantitative Studies (Effective Public Health Practice Project, 1998).

We extracted data on the intervention models described and synthesise this in our results. We offer a narrative synthesis of themes around the mechanisms of change derived from the papers using thematic analysis (Braun & Clarke, 2006). This involved creating codes from extracts of the texts whenever they referred to the therapy process, for example, what the authors thought was happening in the groups, what they saw changing and how they understood the benefits. The extracts were then

organised into a set of themes capturing the full body of data. This was undertaken by the reviews first author and the coding reviewed by the second author.

## **Results**

### **Qualitative Evaluations**

Scores from evaluations are available in additional online material in appendix 3 and here we summarise the main issues arising. In all but two papers (Black et al, 2015; Parashak, 2008) the authors were in the position of 'practitioner-researchers' and so were intimately involved in the development of their intervention's model and delivery. There was transparency about this structure so we felt this did not impact upon integrity. This practitioner-researcher stance has been a common feature of much art therapy research (McNiff, 1998) where there has also been a fluidity between research and evaluation as an integral part of practice. In two papers a second author from a research field brought a different perspective (Armstrong, Dalinkeviciute, & Ross, 2019; Arroyo & Fowler, 2013).

Many of the papers being evaluating were reflections on previous practice rather than having begun with a research question. An explicit research stance, where the research was integral from the start, was present in only eight papers (those listed in table 1 as case studies, other qualitative, and quantitative and qualitative). This is common among art therapy literature, where reflections upon practice, often in the form of a case study, are the bulk of published material. As such they do not always fit well into models for evaluating research quality, as questions concerning the selection of participants and methods or the clarity of research questions are often not addressed.

In several papers clinical vignettes gave concrete examples of how parents and infants were engaging in the interventions. These helped to ground the descriptions of groups. It would have helped to have more clarity of how these examples were chosen and how reflective they were of the group as a whole. With regards to themes, several papers came up with themes about the work undertaken, but it was not

always made explicit how these were derived and whether it was part of a systematic process. This may be due to the author's immersion in the material where part of their practice involves the ongoing iterative process of considering themes and reassessing how these fit. In communicating with broader audiences it may be useful if this is made more explicit.

In evaluating the specific questions included in our evaluation on the replicability of the model and the clarity of the use of the art within the process, we found that generally there was very rich description. Sometimes some of the more prosaic details, for example timeframes or structure, were not specified and when this was the case we have followed this up with the authors to add this detail wherever possible (seen in table 3: Intervention models). It was generally true that the role of art materials in the process was central to the interests of the author and given a lot of consideration.

#### Quantitative evaluations

All 5 quantitative papers were rated as weak on the Quality Assessment Tool for Quantitative Studies (Effective Public Health Practice Project, 1998), largely due to none of the studies being controlled or blinded for outcomes. However, this is to be expected in small cohort studies of an intervention. Most scored highly for reporting selection processes and drop outs and for their data collection methods.

#### Data synthesis

There were insufficient quantitative papers to meaningfully combine their data for a meta-analysis, given the problem of estimating the between-studies variance with a small sample (Borenstein, Hedges, Higgins, & Rothstein, 2009). We have extracted the results (table 2). Where no statistical analysis was included but data were given (Black et al., 2015; Lavey-Khan & Reddick, 2018) we have run our own analysis. Improvements on measures of parent's depression and wellbeing were observed across a variety of instruments (Depression Anxiety Stress Scales (DASS, Lovibond & Lovibond, 1995), Edinburgh postnatal depression scale (Cox, Holden and Sagovsky, 1987), Warwick-Edinburgh Mental Wellbeing

Scale (WEMWBS, 2006, NHS Health Scotland, Patient Health Questionnaire (PHQ, Kroenke, 2014), Generalised Anxiety Disorder Assessment (GAD-7, Kroenke, 2014) and Parenting Stress Index (PSI, Abidin, 2012) and demonstrated to be moderate to large, and significant in N = 3 studies. Improvements on measures of parent's self-esteem and self-efficacy (self-report, Generalized Self-Efficacy Scale (GSES, Schwarzer & Jerusalem, 1995)) were also observed in two studies, and demonstrated as significant in N =1. Improvements in toddler's social competence and problematic behaviour were observed in one study and we have calculated it to be significant for competence but not problematic behaviour. In one study there was a significant improvement in a non-standardised measure of parent identified goals. Improvements to the parent-child relationship were recorded in four studies across a variety of instruments (Mothers' Object Relations Scale (MORS-SF, Oates et al, 2018) observation, non-standardised survey, self-report, Parent–Infant Relationship Global Assessment Scale (PIRGAS; Zero to Three, 1994)) but appeared moderate, and were demonstrated to be significant in only 3 of the measures.

[insert table 2: Quantitative results summary]

Table 2: Quantitative Results Summary

Paper	Sample size	Measures – unless specified, larger scores post intervention indicate improvement	Results
Armstrong, Dalinkeviciute, & Ross (2019) A Dyadic Art Psychotherapy Group for Parents and Infants – Piloting Quantitative Methodologies for Evaluation	N=10	Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)	T1 M = 42.2, standard error = 2.9 T2 M =53.1, standard error = 1.8 Improvement is large and significant (Repeated Measures ANOVA), $F(1,9)=40.06$ , $p<.001^{**}$ , $\eta p^2 =.82$
		Mother Object Relations Scale (MORS-SF)	T1 M = 52.0, standard error = 2.0 T2 M = 55.4, standard error = 1.9 Improvement is small and falls short of significance, $F(1,9)=4.40$ , $p=.065$ , $\eta p^2 =.33$
		Observational tool –measures duration of markers of synchronous communication in 1 <sup>st</sup> and last sessions - Touch, Proximity, Goals, Emotional Presentation, Connections, Language, empathy and Boundaries – in their positive, flat and negative variations	Duration of positive behaviours at T1 M = 161.75, standard error = 82.03 T2 M = 515.73, standard error = 71.44 Improvement is moderate and significant, $F(1, 9) = 10.00$ , $p =.012^{*}$ , $\eta p^2 = .53$
Armstrong & Howatson (2015). Parent-infant art psychotherapy: a	N=11	Non-standardised survey about how mother views relationship with 10 questions that can	Questionnaire responses showed an overall improvement of 8.2% between 1 <sup>st</sup> and last sessions. Pre-intervention M = 40.3, SD = 7.8

creative dyadic approach to early intervention.		score between 1 and 5 for a maximum potential score of 50.	Post Intervention M = 43.6, SD = 8.5 Responses significantly more positive after the intervention (paired samples t-test), $t(9) = -2.7$ , $p = .025^*$
Arroyo & Fowler (2013). Before and after: A mother and infant painting group.	N = 4 (3 mothers and 1 father who attended together with mother).  note that of these participants, 1 mother's children were out with our age criteria of under 3's	Edinburgh postnatal depression scale – lower score indicates improvement	Pre intervention M=18.25, SD = 4.11 Post intervention M=15.5, SD = 5.69 The effect size was medium ( $d = 0.56$ ) but the difference was not significant, $t(3) = 0.949$ , $p = 0.207$ . The authors suggests that this may be explained by the need for a larger sample size to achieve sufficient power.
		Self-report measure of self esteem	Pre-intervention M=2.5, SD= 1.29 Post intervention M=4.5, SD = 2.65 The effect size was large ( $d = 1.02$ ). and the difference was significant, $t(3) = -2.459$ , $p = 0.046^*$
		Self-report measure of relationship to child	Pre-intervention M=6.25, SD=3.3 Post-intervention M= 8.5, SD=1.3 The effect size was large ( $d = 0.98$ ) but the difference was not significant, $t(3) = -2.029$
Black, Ellis, Harris, Rooke, Slater, & Cuch (2015). Making it Together: An evaluative study of Creative Families	N=36 (not all 36 included in the tables of results so n is indicated in each measure)  Statistics calculated from data tables per participant given in the paper (means differ from those stated in the paper reflecting that they may have dealt with missing data differently)	Depression, Anxiety and Stress scale (DASS) – lower scores indicate improvement	Average scores reported in text, at T1 59, at T2 32 T1 M = 56.1364, SD = 19.65002 T2 M = 33.1818, SD = 22.58241 n=22 (25 in report table but 3 with missing data excluded) The decrease was significant (paired samples t-test), $t(21) = 5.832$ , $p < .001^{**}$
		The Parent-Infant Relationship Global Assessment Scale (PIRGAS)	Average scores reported in text, at T1 73, at T2 79 T1 M = 79.2609, SD =13.73521 T2 M = 85.9130, SD = 23.9.87151 n=23 (26 in report table but 3 with missing data excluded) The increase was significant, $t(22) = -4.347$ , $p < .001^{**}$
		The General Self-efficacy scale (GSES)	Average scores reported in text, at T1 25.8, at T2 = 29.8 (n=23) $\Omega$
		The Brief Infant Toddler Social and Emotional Assessment (BITSEA) – High scores reflect concerns so a lower score indicates improvement	Problem scale T1 M =15.1176, SD = 7.81731 T2 M = 12.0588, SD = 8.79965 n=17 The decrease was not significant (paired samples t-test), $t(16) = 1.675$ , $p = .113$  Competence scale T1 M = 5.0588, SD = 2.86074 T2 M =3.1765, SD = 1.94407 n=17 This decrease was significant, $t(16) = 3.771$ , $p = .002^{**}$
Lavey-Khan & Reddick (2018). Painting Together: A Dyadic Art Therapy Group. Unpublished manuscript.	N=6 note that of these participants, 1 mother's child was out with age criteria of under 3's	Parent health questionnaire, depression scale (PHQ – 9) – lower score indicates improvement	T1 M=6.6, T2 M = 7.1 $\Omega$
		Generalised anxiety disorder scale (GAD – 7) – lower score indicates improvement	T1 M = 5.5, T2 M=3.5 $\Omega$
		Parenting Stress Index, short form (PSI- SF)	Mean changes to scores between T1 and T2 taken from graph in paper. $\Omega$ Parental Distress - mean decrease of -6.8 Parent-child interaction – mean increase of 1.6 Difficult child – mean decrease of -24 Total stress – mean decrease of -10.4
		Parents identified goals – non standardised - scaled from 0-10	Calculated from individual scores given in graphs in paper T1 M = 2.88 (SD 1.06), T2 M = 7.17 (SD 1.72) n=6 This increase was significant (paired samples t-test), $t(5) = -5.219$ , $p < .003^{**}$

$\Omega$  Paper did not give participants individual data so no statistical analysis possible

## Synthesis of intervention models and mechanisms of change

The intervention models drawn from the 14 papers are summarised in table 3. Through the process of thematic analysis we arrived at two overarching themes capturing the mechanisms of change within art therapy groups for parents and infants. The first captured those aspects of the therapeutic group experience - which may be present in other parent-infant approaches - and within this we identified four sub themes: the kind of space created, the benefits of being a group member, the qualities the therapist brings, and the direct support for relationships. The second captured those aspects that were unique to the art process and within this we identified the four subthemes of materials, process, containment and the final art works.

[Insert Table 3: Intervention models]

Table 3: Intervention Model Summary

Paper	Setting	Population	Approach	Facilitators	Numbers	Timeframe
Hall (2008)	In a UK sure start centre	Mothers with PND (not acute crisis) and infants. Edinburgh Post Natal Depression scale for inclusion (12 or higher)	Closed group. Describes circle of mums on plastic, painting, moving to refreshments and conversation after painting, paintings reflected on together and paintings from week before given back.	Seem to be 3 workers but not specified	Not stated	Described as time limited but does not include detail of duration, numbers or length of block.
Hosea (2017)	Sure start centre in deprived area of UK	Mothers and/or fathers with Referrals where additional needs had been identified to strengthen mother-infant relationships. Additional info	Rolling parent and infant group with a non-directive approach. Overall time around an hour with soapy water wheeled out after about 45 mins, time to look at paintings and	Art therapist with co-facilitators of sure start worker, nursery nurse and family support worker	Additional detail from author that there were no rigid set numbers but it	Additional detail supplied by the author that this group functioned on a rolling

		from author that referrals came from within the Sure Start team, including Health visitors and also from the Parent Infant psychotherapy service within the NHS Trust in later years. Home visit undertaken prior to attendance.	pictures taken during group played back on a digital photo frame		was usually four adults and their infants.	basis with no time limits but after a year other groups were offered.
Parashak (2008)	US programme run by local AT training course in conjunction with Head start (US equivalent of Sure Start)	Teen parents who were in a special school program that let them do education whilst also spending time with babies. Infants 3-18 months. Author notes that a drawback of the model where they all attended the same school programme was that the mothers came with a pre-established culture and outside issues could emerge in the group.	Closed group with a semi-directive approach using activity stations set up with art and other developmentally appropriate activity, like music and toys. Within that they encourage free choice and mums were interviewed before starting to identify aims for the group. An additional directive element of journals for the mothers was used with set activities and some writing prompts etc and some to do at home.	Facilitated by supervised art therapy students (numbers not stated)	Not stated	Clarification from author that there were 4 fortnightly sessions of 1.5 hrs then a follow up interviews
Proulx (2000).	Canadian 'joint parent-child art therapy intervention'	Referrals for relationship problems as picked up in a Crowell scale but context not given	Does not state group format as focussing on one specific intervention. Gives clear description of the collage intervention and what it might offer.	Not stated	Not stated	Not stated
Proulx (2002)	Montreal Children's Hospital, Canada	Referrals where there were relationship difficulties	Parent child interaction group with a structured directive approach.	1 art therapist and 1 helper.	6 dyads - mother or father and	8-10 sessions of 1.5 hrs

		assessed with Crowell assessment procedure (Crowell, 2003) Area with multi lingual English and French and sometimes neither the first language of parents attending.	Half an hour art therapy section with carefully chosen activities, and then time for free play and parental discussions then songs/games together.		'toddlers'	
Proulx (2003)	Canada – describes a few different contexts such as the children's hospital Family infant team, a preschool day treatment centre and in Kindergartens	Referral criteria not stated as covering a large area of practice not a specific group – gives examples of assessments that may be used such as Child behaviour checklist (Achenback 1992) parenting stress index (Abidin 1990) and the Crowell Assessment (Crowell, 2003). Describes working with either parent but only one at a time to focus on the dyads interaction.	Directive model where the Art Therapist introduces interventions/activities each session. Describes a mix of close and separate activities across the weeks. Different groups and some differences in model for infants and pre-schoolers. Model can be integrated into an existing group, e.g. Therapeutic playgroups where the art therapy is integrated, or a half hour section in the middle of an interaction group or can be a standalone model.	Generally describing art therapist and a co-facilitator	Generally 6 dyads but describes a variety of settings with different models (including work with individual dyads)	Depends on kind of group
Meyerowitz-Katz (2017)	Therapeutic playgroup within CAHMS, UK, that serves a multicultural urban area	Specific case referral from paediatrician due to food refusal for overall group referrals from GPs, health visitors and nurseries where children are under 5. Fathers are invited but described as usually only	Therapeutic playgroup with a structure of shared meal (incl. staff) then mother-child-art therapy group then separate discussion group time for mothers while children remain with 3 staff in playroom. The art making time	Multidisciplinary team of 4 staff – Art Therapist, child psychotherapist, group psychotherapist and family therapist	4 families at a time	Additional information from author that the group was an open-ended group, with dyads remaining as long as they needed.



		attending at reviews.	itself is non-directive. Examples of material from session being able to be discussed in the mothers group.			The specific case discussed attending between 9 months and a year.
Hosea (2006) and (2011)	Group in an NHS baby clinic	Invitations to join the group come from health visitors. "Pre-nursery age" so 0-3s, mixed levels of involvement depending on age. Mothers described but can also include fathers or other family members.	An open art therapy group with non-directive approach.	Art therapist with 2 health visitors and a nursery nurse co-facilitate. Individual psychodynamic supervision and monthly peer supervision of 4 workers	3-6 families in group with 4-10 children	Ran weekly during school terms on an open basis with parents able to come and go as they wish. Additional information from the author on the duration of each session that parents stayed an hour to an hour and a half
Armstrong, Dalinkeviciute, & Ross (2019)	Community groups set up with the early years' partnership in a rural area	Referrals criteria focus on concerns about attachment relationships coming from Health visitors, social workers, family nurse partnership and self-referrals. Open to under 3's with their primary carer (but all mothers who took part). Home visit undertaken prior to attendance.	Closed art therapy group with a non-directive approach - same materials each week but adding in additional things in response to suggestions from parents and to meet needs identified of infants. Describes time to get settled, art making time then clean up and snacks and reflection at end.	Art therapist with a co-facilitator who was a children's worker trained in community education and family therapy	6-8 dyads in each group and follows 2 groups	12 week group, each session 1.5 hours

Armstrong & Howatson (2015).	Community groups set up with the early years' partnership in rural area.	Referral criteria as above	Closed art therapy group with a non-directive approach. Format as above	Art Therapist with a counsellor as Co-facilitator	6-8 dyads in each group and follows 2 groups	12 week group, each session 1.5 hours
Arroyo & Fowler (2013)	Welsh sure start centre	Referrals from health visitors due to PND and low self-esteem	Closed art therapy group with a non-directive, integrative and systemic approach (basing on model of Hosea and Hall). Additional information on session duration from the author: 20 mins initial chat time, 40 mins paintings time, 15 mins tidy up and washing babies, 25 mins chat time incl. refreshments, 20 mins painting reflection time	Additional information from author: co-facilitators included one Health Visitor, and one Nursery Nurse as assistant	5 mothers in group (2 attending together with fathers)	20 week group, each session 2hrs
Black, Ellis, Harris, Rooke, Slater & Cuch (2015)	Southwark, London – multi ethnic area, with high levels of deprivation and incidence of social work involvement. A collaboration between Southwark's Parental Mental Health team and the South	Referrals of families who meet the criteria for the parental mental health team – experiencing mental distress and with a child under 5. Open to mothers and fathers but all mothers who took part. Report describes social stressors on the families which are impacting on mental health	A participative arts project structured with 5 first weeks in a children's centre which had a crèche for infants while parents learned art skills and then the second 5 weeks parents and infants work together within the art gallery. The art making was directive but did respond to ideas from parents. They described that each artists own practice was an influence on the workshops they offered. Sessions were followed by lunch for participants,	It is run by an artist together with a mental health worker and a gallery educator	Ran for 2 years, with potential for 70 parents with under 5s – 46 parents and 61 children actually taking part, and 36 parents completing the programme. Up to 12 parents in each group.	The group is in 10 week blocks. Individual session length not given.

	London Gallery		children and staff team			
Lavey-Khan & Reddick (unpub)	London, within a particular nursery catchment area.	Members invited from the nursery catchment area who met CAMHS service criteria (parent with a mild to moderate mental health problem, and a concern about their 1 to 5-year-old child). Referrals from health visitors, family support and outreach Workers, the nursery, and CAMHS	The group had a slow-open format and a non-directive approach. Time made up of 55 minutes of child-led art making, 10 minutes tidying and getting cleaned up, and the final 10 minute reflecting on the artwork.	Co-facilitated by an art therapist and a CAHMS clinical psychologist	7 families attended over a 10 month period	33 sessions (term time only) each lasting 1hr 15

### Intervention Models

The literature showed a variety of different models for group art therapy interventions targeting parents and infants (table 3). In terms of population some were focused on specific referral criteria, such as post-natal depression, while others were broadly looking to improve relationships. The majority focused on under 3s but a couple had a narrower age range (Parashak, 2008; Proulx L, 2000) and four included children under the age of 5 in their criteria, although describing work in the younger age range in their cases (Arroyo & Fowler, 2013; Lavey-Khan & Reddick, 2018; Meyerowitz-Katz, 2017; Proulx L, 2003).

Four groups operated without time limitations, one had 33 weeks with families choosing the timeframe within that, whilst seven describe time-limited blocks ranging from 4 to 20 weeks with the average being 11 weeks. The format for groups included open groups (where any families can join at any time), closed groups (with a group of parents referred for the duration of a block) and rolling groups (which sit somewhere in between, with parents being invited to join but able to join and leave an ongoing group as

they please). All groups were run with at least two facilitators. Co-facilitators were generally experienced with young children and families and psychological understanding, rather than having an art background. Lavey-Khan & Reddick (2018) highlight the benefits of different perspectives in the co-facilitators and the opportunities for shared learning. Papers stressed the importance of clinical supervision for the facilitating team.

All papers identify the primacy of the art making but there is a notable difference between a directive approach in North America (Parashak, 2008; Proulx L, 2000, 2002, 2003), with more structure and activities chosen by the therapists as an intervention, and the UK practitioners who tend to state that they are non-directive. Within the non-directive approaches there are various degrees of structure to how the time is used - for example the model described by Meyerowitz-Katz (2017) has a structure moving from meals to art therapy to separate talking therapy whilst others describe more fluid use of the time (Armstrong & Howatson, 2015; Hall, 2008; Hosea, 2017). However the art making itself is left open to the dyads and they often described actively encouraging parents to follow the infants lead (Armstrong, Dalinkeviciute & Ross, 2019; Armstrong & Howatson, 2015; Arroyo & Fowler, 2013; Hall, 2008; Hosea, 2006, 2011; Lavey-Khan & Reddick, 2018). The exception in a UK context was the participative arts project (Black et al., 2015) where activities were determined by the workshops the artists delivered. Black et al (2015) are clear that they were not art therapy and, in fact, seem to hold certain misconceptions about art therapy being more directive and making participants deal directly with mental health issues (p78, Black et al 2015) which is not evidenced in the descriptions of art therapy in the papers identified by this review.

It is interesting to note here the approaches to the final art work. Meyerowitz-Katz (2017) described keeping the art works till the end of treatment, which is standard art therapy practice. All the other literature steered away from this convention, either returning work to go home right after the session (Proulx, 2003) or drying and caring for the art work to return the next week (Armstrong, Dalinkeviciute &

Ross, 2019; Armstrong & Howatson, 2015; Arroyo & Fowler, 2013; Hall, 2008; Hosea, 2006, 2017). This may reflect the needs of this specific population where infants need more immediacy and art work may no longer be meaningful to them after a delay.

In terms of the theoretical base there was a lot of consistency within the literature. Most common was reference to attachment theory (Bowlby, 1997) as well as other ideas from developmental psychology which come under that umbrella of early relationships such as intersubjectivity (Stern, 2000; Trevarthen & Aitken, 2001), parental reflective function (Fonagy, Gergely, Jurist, & Target, 2004) and early brain development (Perry, 2001; Schore, 2001). Among psychoanalytic approaches it was common to reference Winnicott (1971) and Object Relations (Bion, 1962) and a couple brought in Jungian analysis (Jung, 1959). The influence of a number of other therapeutic modalities were referred to; most common being the Parent Infant Project (Baradon, 2005), Systemic Family Therapy (Carr, 2006), the Watch, Wait, Wonder approach (Cohen et al., 1999) and Video Interactive Guidance (Landor & Kennedy, 2011)

### Mechanisms of change

Each of the papers considered potential mechanisms of change in the intervention, as observed by the art therapists and researchers and taking on feedback from participants. Our thematic analysis has organised these mechanisms into a framework including those associated with the quality of the group (the kind of space created, the benefits of being a group member, the qualities the therapist brings, and the direct support for relationships) and aspects unique to the art process (materials, process, containment and the final art works). Each theme is dealt with in turn, bringing together the material presented in the papers.

### *Qualities of the group*

#### *The space created*

All papers emphasised that the quality of the space created by the groups is one of safety and trust where 'no demands are made' (Hall, 2008) but also one which is a little bit different from normal life with the potential to be playful. Within the safety created there is the scope to be imaginative, to experiment, to be playful together and also to view the relationship differently. Hosea (2017) describes how in this kind of space the relationship may be "freed of some of the distortions that are evoked in the caregiver in connection to the infant in everyday life" and Arroyo and Fowler (2013) describe how they can "explore their relationship with one another in new, more expressive and creative ways, free from the constraints of normal domestic life".

An important aspect to the safe space created by the group is that of containment; both on a practical physical level and on a psychological level. Papers emphasised how the boundaries of the groups mattered, how they begin and end, the consistency of the venue, time and facilitators, and the rituals within the format of the group (Armstrong & Howatson, 2015; Black et al., 2015; Hosea, 2006, 2017, Proulx L, 2000, 2002, 2003). They also describe how the groups offered a holding framework and that this enabled the parents to feel safe enough to explore and also draw on their own resources.

#### *The benefits of being a group member*

Benefits were reported from being a member of a group with other parents, focusing on social benefits and increases in confidence. Although no papers describe working on group processes directly, as you may in a traditional model of a psychotherapy group, Hosea (2017) describes how the group acted "as a community, with members acting like helpful neighbours or maybe aunties, uncles or cousins" and Armstrong and Howatson (2015) describe the 'sense of a support network'. Within this atmosphere of mutual support the papers describe the parents as gaining confidence in their abilities, in meeting new people, in their friendships and in their accessing of other services, in trying new activities and in

learning from each other (Armstrong, Dalinkeviciute & Ross, 2019; Arroyo & Fowler, 2013; Black et al., 2015; Hall, 2008; Hosea, 2011; Lavey-Khan & Reddick, 2018).

The importance of shared experiences was stressed in many of the papers (Armstrong & Howatson, 2015; Arroyo & Fowler, 2013; Black et al., Hall, 2008; 2015; Hosea, 2006, 2017; Lavey-Khan & Reddick, 2018) with parents being able to share their own life experiences and the difficulties they are facing both with practicalities and with mental health, receiving support from the group and also an understanding that others have similar struggles, lessening feelings of isolation.

There was also an acknowledgement that the therapists need to balance some of the tensions within the group dynamics between one-to-one and group relationships; between interaction with the therapist rather than the group or between the engagement with the group with the need to keep the parents' focus on their infants (Lavey-Khan & Reddick, 2018; Parashak, 2008).

#### *The qualities the therapist brings*

Those features of facilitators that are essential to the function of the groups were described using qualities such as sensitivity and empathy (Black et al., 2015; Hosea, 2017) as well as the ability to scaffold experiences for the infant when the parent may not be managing (Armstrong & Howatson, 2015). Many of the papers referred to the concept of modelling (Armstrong, Dalinkeviciute & Ross, 2019; Armstrong & Howatson, 2015; Meyerowitz-Katz, 2017; Parashak, 2008; Proulx L, 2000) where the art therapists model a way of behaving and interacting with the infants. This connects to the descriptions of therapists getting down on the floor and joining in alongside that are given in a number of papers (Hall, 2008; Hosea, 2006; Parashak, 2008). This might contribute to a 'flattening' of the relationships (Black et al., 2015) giving a more egalitarian feel which may contrast to other services. Armstrong and Howatson (2015) describe the balance to be struck when modelling positive behaviour of not wanting to take over or be the expert and therefor reinforce any inadequate feelings in the parents.

This is echoed in Parashak (2008) describing how they must not try to be ‘the better mother’ and in Hosea’s descriptions of ‘grandmother’ transference with the connotation of support and experience but also the risk of being seen as ‘critical or withholding’ (2006, 2017).

### *The support for the relationship*

The relationship between parent and infant is of central importance in all the papers and this is something that most describe working on directly as well as through art materials (the exception being the participative arts project which may reflect the fact that this is not coming from a therapy perspective). The techniques described are about increasing parental responsiveness and their emotional understanding of the infants. This is done through helping parents to interpret infant’s communications, building their attunement, reflective capacity and skills at mentalising (Armstrong, Dalinkeviciute & Ross 2019; Armstrong & Howatson, 2015; Arroyo & Fowler 2013; Hall, 2008; Hosea, 2006, 2017; Lavey-Khan & Reddick, 2018). Parashak (2008) describes how positive interactions were ‘reinforced when observed by the art therapist’ and Hosea (2017) describes ‘seeking to enlarge maternal sensitivity... alertness to infant signals, appropriate and prompt responses, and capacity to negotiate conflict goals’.

### *Qualities specific to using art*

#### *Art Materials*

An understanding of the qualities of the materials used provides a unique aspect to the art therapy groups described, different to other parent-infant approaches. The papers give consideration to keeping the materials developmentally appropriate (Parashak, 2008; Proulx L, 2000, 2002) and how they may use their somatic (Hosea, 2006; Meyerowitz-Katz, 2017) or symbolic (Proulx L, 2000, 2002) qualities. Proulx (2002) for example describes how art materials may have specific symbolisms in the context, for example resembling food or baby powder and gives this topic extensive discussion in her handbook



(2003), while Parashak (2008) describes the developmental considerations given to materials, such as making media graspable and the paper big enough 'to withstand wide, sweeping scribbles'. Hosea (2006) highlights the importance of the colour within her groups. The physicality of materials is also important and the need for physical contact between parent and infant whilst using them is highlighted (Armstrong, Dalinkeviciute & Ross, 2019; Armstrong & Howatson, 2015; Hall, 2008). All these considerations help to maximise the chances of positive interactions. Some papers explain how they use specific qualities of certain materials to address particular needs which have been identified (Armstrong & Howatson, 2015; Proulx L, 2000, 2002), for example materials such as bubble paintings or puppets may promote eye contact, and collage may help parents to engage with their infants without the anxiety about mess or the need to be constantly putting in limits. The introduction of materials may help to redirect interactions; Proulx (2000) describes how adding shakers to an activity as the infant begins to lose focus will help to prolong their engagement and Armstrong and Howatson (2015) describe how materials can be used to offer regulation, for example, by offering absorbent paper if paint is spilling off the page. Thought is also given to how the materials are presented in order to invite in the participants, particularly the parents, and get them engaged (Armstrong & Howatson, 2015; Proulx L, 2002).

### *Art Process*

The art process provides opportunity for playful engagement and all papers emphasised how the art making brought the parent and infant together, drawing the dyads into interactions. Hall (2008) describes how infants were always interested in being involved in painting with their parents and that the parents respond with interest. Lavey-Khan & Reddick (2018) also describe how infant-led themes were naturally picked up by the whole group, allowing shared communication. The shared creative experience of making art is described as strengthening relationships (Arroyo & Fowler, 2013), helping the parent be more "in-tuned" to their child (Parashak, 2008) and physically and emotionally closer (Hosea, 2006). The papers describe how parents are encouraged to work at the infant's developmental

level (Parashak, 2008; Proulx L, 2000, 2002) and to follow the lead of the infants (Armstrong, Dalinkeviciute & Ross, 2018; Proulx 2000). The process may also allow parents to view their infant in a new way (Arroyo & Fowler, 2013; Hosea, 2017) and may allow new forms of communication between the dyads. From the art therapists' perspectives Meyerowitz-Katz, (2017) interpreted the art making as enabling 'the expression of psychosomatically held pre-symbolic material to be communicated, received, contained and transformed' and Hosea (2006) describes the 'opportunity for communicating in a positive, reciprocal way'. The art materials themselves facilitate communication through the way their different qualities are used, for example the colours chosen or the kinds of marks made (Hosea, 2006, 2011, 2017) and this is something parents can be encouraged to engage with (Armstrong, Dalinkeviciute & Ross, 2019). As infants respond to the different tactile qualities of the materials and the new sensations, this gives parents the opportunity to reflect on how their infants are responding to them and parents can also be supported to use the materials themselves as a way of offering attuned responses back (Armstrong, Dalinkeviciute & Ross, 2019; Armstrong & Howatson, 2015; Hosea, 2017).

Art making can be joint or separate as the dyads relate in different ways (Armstrong & Howatson, 2015) and acceptance of this may be part of the process (Hall, 2008). The parents themselves may be able to express difficult feelings through the art work (Meyerowitz-Katz, 2017; Parashak, 2008) and the infants may use the tactile qualities of the materials and their feel upon the body to explore their sense of self (Hosea, 2011, 2017).

### *Containment in the art*

Containment has been discussed within the theme of the safe space that the group creates but there was an additional aspect to the containment described in the papers in relation to the art itself. Some of the art materials have the potential to become very messy and there were descriptions of the therapist having to provide containment to stop the materials becoming overwhelming. A number of the papers

describe the challenges that some parents had with the messy nature of materials (Armstrong & Howatson, 2015; Arroyo & Fowler, 2013; Hosea, 2011) and the adaptations the therapists might make to keep the art making fun rather than chaotic. Proulx (2002) describes how the set-up of materials, for example with lots of small containers and trays to paint in, might build in some limits in order to provide containment and keep it pleasurable for the adults as well, while Hosea (2006) explains that a role of the facilitators is to make the mess safe enough that the dyads can be playful. The art therapist may be able to redirect mess that is distressing a parent into something more positive as Hosea (2017) demonstrates when a baby spreading paint around the room on their feet was encouraged to make footprints onto paper. The balance of the potential for chaos with the materials is also that they may offer containment through their own qualities. Armstrong and Howatson (2015) give an example of using an activity with large cardboard boxes to offer playfully some contained spaces to very energetic twins who had been struggling to regulate and Proulx (2003) describes an activity painting inside boxes to make aquariums where the use of the box rather than paper helps to contain the painting process and also becomes a literal container for cut out fish.

### *Final Artwork*

The papers consider how final art works were invested with meaning, and how they were displayed and carefully looked after by the facilitators (Armstrong, Dalinkeviciute & Ross, 2019; Armstrong & Howatson, 2015; Hosea, 2006). The ritual of sticking a painting on a wall may allow for 'natural separation' (Proulx, 2000) and the painting's impact can extend beyond the session as they are reflected on the next week, taken home and displayed (Armstrong & Howatson, 2015; Proulx L, 2000). Some of the papers describe the final art works as having symbolic content, not so much in their imagery but embodied within the artwork itself. They are symbolic both as a representation of the relationship (Proulx, 2000), a token of affection (Hosea, 2006), and as representations of future hopes (Hosea, 2011; Parashak, 2008). Those art therapists who created additional imagery in the form of photo or video also

describe the reactions of the parents to viewing these and how it may capture positive interactions and offer the parents an opportunity for reflection (Arroyo & Fowler, 2013; Hosea, 2006, 2011; Parashak, 2008).

## **Discussion**

This review of parent-infant art therapy approaches identified 14 papers where parents and their children under 3 were making art work together in an art therapy environment. As discussed above, Black et al (2015) was not art therapy but was considered relevant. One paper described work by art therapy students under supervision and all 12 other papers described work by qualified art therapists. All papers described a group approach and there were a mixture of methodological approaches to research. Many papers were reflections on practice written retrospectively which impacted upon evaluations of these papers, while those where the research stance was explicit included papers with a qualitative approach and those which combined quantitative and qualitative methods to collecting data. In those papers collecting quantitative data there was a limitation of small numbers of participants for all of them and none included control groups. However, within these limitations they identified a number of positive changes for parents following their participation in art therapy groups using a variety of measures of parental well-being. They also found improvements to the parent-infant relationship using parent reported measures and, in one paper, observational measures of attachment. We would suggest that this combined evidence provides a convincing argument for the provision of art therapy to parents with young children who are struggling with their own mental health or who have worries about their relationship to their young children although further research is needed in order to firmly state the benefits of art therapy with this client group. Our thematic analysis highlighted those aspects of the parent-infant art therapy groups which may be creating change for the participants. We found these to be highly consistent across the papers and a useful model emerged which made a distinction between those mechanisms of change that may be found in a number of therapeutic approaches and those that

were unique to working with art; within the materials, the making process, the final art works and in the art-based containment. It is our hope that this model of change will prove pertinent to contemporary practice and useful to practitioners finding their way in this field as well as providing a starting point for research.

## Conclusion

### *Limitations*

There were a number of limitations to this review. In particular, the small volume of research necessitated the inclusion of studies which were not outcome focused and therefore did not lend themselves to some of the measures of quality or to any synthesis of results. However, a benefit to including a diverse range of papers is that we were able to include all the published material in the field of parent-infant dyadic art therapy at this point to provide a real sense of the current state of evidence and a complete resource list to practitioners. They also added depth to our qualitative thematic analysis. The number of quantitative studies was not sufficient for meta-analysis, which would have added strength to any arguments for the benefits of the intervention.

Our search criteria were very broad so we do not think papers were missed due to our criteria and we translated any papers we found that were not in English. We were unable to get hold of one unpublished report that may have added to the evidence base and there are possibly further unpublished reports whose authors did not respond to our call. In terms of our analysis, we have to acknowledge that we are involved ourselves in two of the papers included and so may have benefitted from a larger team to check our evaluations and the coding of the thematic analysis. However we have striven to be objective and it is a further reflection of the small field that those involved in research in this area are also those seeking to bring together the research in a meaningful way.

### *Recommendations*

In order for there to be concrete evidence that it is the art therapy process which has brought about change there is a need for controlled trials in this area and for there to be larger participant sizes than those reported to date to give statistical power to appraisals of impact. We would also recommend the consideration of systematic behavioural observations as an outcome measure in order to add to the parents self-reports of change and to connect therapists interpretations to observed behavioural changes. The potential mechanisms for change that we identified would be further strengthened with more direct feedback from participants to strengthen the observations of the art therapists and researchers. It would also be valuable to have more description of specific behavioural changes where sometimes papers are reliant on interpretations from art therapists. This framework of mechanisms of change may offer a useful way to structure this kind of specific observation. Artists and art therapists have long recognised the relational potential of art making (Dissanayake, 2000) and these themes provide a promising base for future research into those unique aspects of art making within dyadic work and how they may directly impact upon relationships.

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#### Appendix 1 – Texts excluded at read through stage and reasons

Reference	Description	Reason for exclusion
Afnan Hamed-Agbariah, & Rosenfeld, Y. (2015). The added value of art therapy for mothers with post-partum depression in Arabic society in Israel. <i>Harefuah</i> , 154(9), 568–572.	RCT trial comparing psychotherapy alone against psychotherapy together with Art therapy for mothers with Post-Partum Depression, n=144 mothers. Translated from Hebrew	Exclude not including infants
Aguilar, B. A. (2017). The Efficacy of Art Therapy in Pediatric Oncology Patients: An Integrative Literature Review. <i>Journal of Pediatric Nursing</i> , 36, 173–178.	Integrative literature review of paediatric oncology and art therapy although included birth to 18 years in their search the results they got were for children not infants and the interventions were to the child rather than with a parent	Exclude as not including parents and age group too broad
Bergese, R. (2017). Art therapy in the early years: therapeutic interventions with infants, toddlers and their families. <i>Infant Observation</i> , 20(2–3), 198–202.	Book review	Excluded as it's a review of another book which was included in the review
Bromham J and Jasieiecka, M. (2013). The Loreto drawn together, parent-infant project. Unpublished report	An unpublished report from a parent-infant art psychotherapy project in the UK	We were unable to obtain a copy after contacting the authors and the centre where the work took place due to service relocation
Buschel, B. S., & Madsen, L. H. (2006). Strengthening Connections Between Mothers and Children: Art therapy in a domestic violence shelter. <i>Journal of Aggression, Maltreatment &amp; Trauma</i> , 13(1), 87–108.	Description of A.R.T (Art therapy material, recursive model, trauma-based psychoeducation) programme with the goal of improving relationships and psychoeducation. Art making is happening in a group of just the children and then shared with family The children in the case examples are latency age not infants, although no age limits were stated	Excluded as not including parents and age too broad
Choi, S., & Goo, K. (2012). Holding environment: The effects of group art therapy on mother–child attachment. <i>The Arts in Psychotherapy</i> , 39(1), 19–24.	A controlled trial of art therapy groups (mothers chose group – AT or control). Twice weekly sessions for 16 sessions with children's ages 2-12 N=6 experimental and 6 control. Measure was the Parental acceptance-rejection questionnaire (PARQ) pre, post and 1 month later	Exclude as not including children in the work and ages largely too old just one mother with a 2 and 4 year old.
Hogan, S. (2015). Mothers making art: Using participatory art to explore the transition to motherhood. <i>Journal of Applied Arts and Health</i> , 6(1), 23–32.	Group of 8 mothers participating in art workshops	Excluded as no involvement of the children, it's about exploring the mother's perspective on her role and experiences
Hogan, S., Sheffield, D., & Woodward, A. (2017). The value of art therapy in antenatal and postnatal care: A brief literature review with recommendations for future research. <i>International Journal of Art Therapy</i> , 22(4), 169–179.	Literature review (not systematic) of art therapy interventions focused on supporting mothers. Acknowledging small evidence base in this area. Overlaps to a small degree with this study in the inclusion of Arroyo and Fowler but is focused on the experience of mothers and improvement of symptoms such as depression or post birth trauma	Excluded as it's a review of Art Therapy for mothers
Jouybari, L., Abbariki, E., Jebeli, M., Mehravar, F., Asadi, L., Akbari, N., ... Moradi, Z. (2018). Comparison of the effect of narrative writing and art therapy on maternal stress in neonatal intensive care settings. <i>The Journal of Maternal-Fetal &amp; Neonatal Medicine : The Official Journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians</i> , 1–7.	Control trial comparing normal treatment, art therapy and narrative writing on maternal stress in a neonatal unit.	Excluded as it does not include the infants
K.C.B. De Moraisi, T.G. Da Silvaii, W. De Carvalho Marroquim Medeirosii, C.M. Veiraii (2013). Gestalt, group therapy and art: The preterm baby reframing in neonatal unit. <i>Revista Da Abordagem Gestaltica</i> , 19(1).	7 group therapy session using art with a Gestalt perspective for 79 parents of 61 babies, based in Brazil.	Excluded as it does not include the infants
Lacour, A.-C., & Soussan, P. Ben. (2006). A time for parents and children to be together. <i>Soins. Pédiatrie, Puericulture</i> , 27:228, 32–33.	A description of a programme for children undergoing medical treatment and a way of doing meetings that include them. Translated from French	Excluded as not using art or including infants
Liddle, J. (2011). Infants and Toddlers at Work: Using Reggio-Inspired Materials to Support Brain Development. <i>Art Therapy</i> , 28(2), 91–92.	Book review	Excluded as a book review not research or theory and working with individual children not dyadic
Menzel, M. (2015). The Arts in Early Childhood: Social and Emotional Benefits of Arts Participation: A literature review and gap-analysis (2000-2015).	Literature review and gap analysis from the USA by the national endowment for the arts, linking arts (visual art, music, drama etc, incl. 3 music therapy but no art therapy) to socio-emotional development.	Exclude as not art therapy or dyadic work
Metzl, E. S. (2015). Holding and creating: A grounded theory of art therapy with 0–5-year-olds. <i>International Journal of Art Therapy</i> , 20(3), 93–106.	Participatory action and Grounded theory approach asking how Art Therapists in North America work with 0-5s based on focus groups with 8 Art Therapists (700 graduates invited), and written or visual art responses to develop a framework.	Exclude as too broad in scope, not necessarily working with parents well and hard to see exact nature of practice as it is focusing more on therapists experience
Milavić, G. (2007). Strengthening Emotional Ties through Parent-Child-Dyad Art Therapy: Interventions with Infants and Preschoolers. <i>Child and Adolescent Mental Health</i> , 12(1), 53–53.	Book review	Excluded as a book review of a text included in our review
Mouradian, L. E., DeGrace, B. W., & Thompson, D. M. (2013). Art-based occupation group reduces parent anxiety in the neonatal intensive care unit: a mixed-methods study. <i>The American Journal of Occupational Therapy : Official Publication of the American Occupational Therapy Association</i> ,	Art intervention trial for parents of babies in a neonatal unit	Excluded as doesn't include the infants and is not art therapy
Netzer, D., & Brady, M. (2009). Parenting as a Creative Collaboration: A Transpersonal Approach. <i>Journal of Creativity in Mental Health</i> , 4(2), 139–151.	A Discursive piece between two authors (neuroscientist and art therapist) about parenting and how it is creative but it is not about art therapy itself or an intervention	Excluded as age range is too old and not art therapy
Perry, C., Thurston, M., & Osborn, T. (2008). Time for Me: the arts as therapy in postnatal depression. <i>Complementary Therapies in Clinical Practice</i> , 14(1), 38–45.	Qualitative study of a group art therapy intervention for mothers of under 2's with depression and/or anxiety	Excluded as it does not include the infants

Plante P; Bernèche R. (2008). A phenomenological study addressing the reinforcement of emotional ties between parent and child through the elaboration and evaluation of dyadic art therapy. <i>CAN ART THER ASSOC J</i> , 21(1).	A phenomenological approach looking at 3 dyadic Art Therapy groups with a focus on improving relationships.	Excluded as the children are too old (5-12s)
Ponteri, A. K. (2001). The Effect of Group Art Therapy on Depressed Mothers and Their Children. <i>Art Therapy</i> , 18(3), 148–157.	Art therapy intervention for mothers with depression affecting child rearing doing 8 week block of art therapy. Mothers making art with therapists at table while children play supervised by crèche worker in other area. Semi structured with 'art directives', some which do involve mothers and children. Qualitative and quantitative outcome measures.	Exclude as not involving the babies routinely in the work
Rayment, A. (2017). Side by side: An early years' art therapy group with a parallel therapeutic parent support group. In D. Meyerowitz-Katz, Julia and Reddick (Ed.), <i>Art therapy in the early years : therapeutic interventions with infants, toddlers and their families</i> (pp. 165–177). Routledge.	Description of an art therapy intervention with 2 case vignettes where infants between 2 and 3 attend an art therapy group while the parents have a separate parent support group.	Excluded as the therapeutic work is separate, happening in parallel rather than dyadically
Sarid, O., Cwikel, J., Czamanski-Cohen, J., & Huss, E. (2017). Treating women with perinatal mood and anxiety disorders (PMADs) with a hybrid cognitive behavioural and art therapy treatment (CB-ART). <i>Archives of Women's Mental Health</i> , 20(1), 229–231.	Description of 6 session of structured intervention using a protocol developed to incorporate CBT and Art Therapy approaches for mothers.	Excluded as it doesn't include the infant
Shamri-Zeevi, L., Regev, D., Snir, S., Shamri Zeevi, L., Regev, D., Guttman, J., ... Snir, S. (2015). The usage of art materials in the framework of parental training. <i>Arts in Psychotherapy</i> , 45, 56–63.	Examines art therapist's views on using art interventions in the context of parental training using semi structured interviews.	Excluded as the children are too old (4 and upwards)
Shore, A. (2000). Child Art Therapy and Parent Consultation: Facilitating Child Development and Parent Strengths. <i>Journal of the American Art Therapy Association</i> , 17(1), 14–23.	Description of practice linked to theory, with 2 case examples, about ways to include parents in a child's art therapy treatment	Excluded as the children are too old
Siegel, L. (2011). A mother learns to enjoy her baby: parent-infant psychotherapy and art therapy in the treatment of intergenerational separation-individuation struggles. <i>Infant Observation</i> , 14(1), 61–74.	Single case study design with object relations theory base, in particular the mother's separation-individuation difficulties from own upbringing and triggered by becoming a new mother. Long term therapy combining joint psychotherapy sessions with individual work where art therapy was introduced.	Exclude as the art therapy was used with the mother alone although joint work was also happening in psychotherapy
Sluckin, A. (1998). Bonding failure: 'I don't know this baby, she's nothing to do with me'. <i>Clinical Child Psychology and Psychiatry</i> , 3(1), 11-24.	2 case studies of therapeutic work with mothers who feel unconnected to their babies. The modality is systemic therapy although the author makes reference to both mothers being engaged in art therapy as well.	Excluded as the art therapy is not described in the article, where the focus is on the systemic therapy
SmithBattle, L., Chantamit-O-Pas, C., Freed, P., McLaughlin, D., & Schneider, J. K. (2017). Moms growing together: Piloting action methods and expressive arts in a therapeutic group for teen mothers. <i>Journal of Child and Adolescent Psychiatric Nursing : Official Publication of the Association of Child and Adolescent Psychiatric Nurses, Inc.</i> , 30(2), 72–79.	Control trial of interventions for teen mothers with a social group being compared with a group using therapeutic arts (convenience sampling). N=8 in each group. Quantitative and qualitative measures	Excluded as it doesn't include the infant
Starcatchers. (2014). Expecting something: A Public Health Initiative. Edinburgh.	Report using qualitative evaluation of an arts based intervention group for under 19s, pregnant or with an under 2 (in separate groups but interaction over lunch in last 2 blocks). Associate artists facilitating with additional artists brought in to respond to a specific idea. Some art making together and some making things for babies.	Excluded as not art therapy
Starr G. (2002). Project Family's unitary art project for parents in Arlington, Virginia. <i>Zero to Three</i> , 22(3).	Description of a parent and child project addressing trauma following 9/11.	Excluded as not art therapy
Taylor Buck, E., Dent-Brown, K., & Parry, G. (2013). Exploring a dyadic approach to art psychotherapy with children and young people: A survey of British art psychotherapists. <i>International Journal of Art Therapy</i> , 18(1), 20–28.	Results from a survey of art therapists who work dyadically with children and their carers	Exclude from review as included all ages groups and no way to separate out what was with infants
Taylor Buck, E., Dent-Brown, K., Parry, G., & Boote, J. (2014). Dyadic art psychotherapy: Key principles, practices and competences. <i>Arts in Psychotherapy</i> , 41(2), 163–173.	Uses a Delphi process to reach consensus about principles, practices and competences for art therapy with dyads.	Exclude as includes all age groups, although principles and competences are relevant for work with infants.
Westwood, Jill; Keyzer, Catherine and Evans, J. (2010). Art Therapy, children 0-6 years and their families: A research project surveying the Sydney region of New South Wales, Australia. And New Zealand Journal of Art Therapy, 5(1).	Literature search then qualitative methods to look at practice with early years with 10 therapists doing interviews, focus groups and art making.	Excluded as it is about a wider age group and not specifically broken down into age ranges. It focuses more on the Art Therapist's experience.
White MP; Anderson S; Stansfield KE; Bulliver B. (2010). Parental participation in a visual arts programme on a neonatal unit. <i>Infant</i> , 6(5). R	Pilot of having artists take art activity into a hospital neonatal unit in Glasgow for families of babies, N=41 Surveys and description of intervention.	Excluded as not including infants and not Art Therapy
Xeros-Constantinides, Sophia; Boland, Bernice; Bishop, L. (2017). Journeyming to Connect: Promoting post-natal healing and relationship formation through the CONNECT Group Art-Therapy Program for distressed mothers and infants: A clinical practice article. <i>AUST J CHILD FAM HEALTH NURS</i> , 14(2).	Clinical practice description – describes programme in Australia of 8 weeks “conjoint-parallel group” – start together for songs catch up etc then mothers separate for art making while babies looked after by ‘infant-therapists’ then reunite for ending rituals of songs and parachute.	Excluded as does not include the infants

## Appendix 2 - Borderline decisions

Papers which did not describe art therapy but were considered as they involved joint art making between parents and infants	The Starcatchers report (2014)	Reports on a project which worked with the Family Nurse Partnership to provide creative engagement for young parents and their infants in an area of high deprivation in artist run sessions. It involved parents in the planning of activities and is reported as well received by parents and professional partners.	Excluded - as there was no specific therapeutic knowledge among the facilitators.
	Black et al., 2015	Reports on a participative arts project, clear that they are not offering art therapy or including an art therapists, but with a similar skill set from the combination of facilitators. These groups were run by an artist jointly with a mental health worker and is therefore	Include - due to the skills set included within the group's structure which includes art and mental health knowledge.

		arguably, more directly comparable with art therapy and the learning relevant. While we are cautious to not confuse what is art therapy we felt it worth including whilst making clear it was not art therapy.	
Papers with approaches where the therapeutic work took place for the parent and infant in parallel or combining dyadic time and separate time to various extents	Rayment, (2017)	Describes an art therapy group for toddlers age 2 and 3 running in parallel to a support group for parents	Excluded – as there was no interaction between parent and infants
	Xeros-Constantinides, Boland and Bishop, (2017)	Describe a creative expressive group for mothers in Australia as a therapeutic group for mothers in own right, but also for the infants and for the dyads. They call it a “conjoint-parallel group”	Excluded – although the parents and infants are together at the beginning and end of the group, the art making in the middle is done separately while the infants are looked after.
	Meyerowitz-Katz, (2017)	Describes a therapeutic playgroup using mixed modalities where parents and children move from sharing a meal together into a mother-child-art therapy group and then separate time for mothers while the children remain with staff.	Included - as the art making section of the time included both parent and infant
	Ponteri, (2001)	Describes an art therapy group for mothers whose depression was affecting their relationship to their infant. The mothers are described making art with therapists while children play supervised by crèche workers in another area.	Excluded - although the article mentions that some of the art directives involve mothers and children, such as a joint scribble drawing, it is unclear to what extent this took place and so we could not classify this as the main methodology of the intervention.
Papers covering a broad area of practice where, dyadic work with parents and infants is potentially included	Metzl, (2015)	Looks at art therapy practice with under 5's in North America, using qualitative approaches to analyse focus groups of art therapists	Excluded - as not a specific focus on dyadic work or under 3's and the studies are from the perspectives of the art therapist's experience
	Westwood, Keyzer, and Evans, (2010)	Looks at art therapy practice with 0-6 year olds in Australia, using qualitative approaches to analyse focus groups of art therapists	Excluded - as not a specific focus on dyadic work or under 3's and the studies are from the perspectives of the art therapist's experience
	Taylor Buck, Dent-Brown, Parry, & Boote, 2014	Survey of dyadic art therapy practice in the UK	Excluded – although likely to include work with parents and infants together within the broader topic of dyadic work, this is not separated out specifically so the study is too broad for inclusion
	Taylor Buck & Hendry, 2016	Delphi process to come to principles of dyadic art therapy practice	Excluded – although likely to include work with parents and infants together within the broader topic of dyadic work, this is not separated out specifically so the study is too broad for inclusion here although the practices, principles and competencies which they identify are of direct relevance.

### Appendix 3: Evaluations of included papers

Paper	Stiles (1999) Qualitative evaluation score (max 112)	Score pro rata excluding non-applicable categories (max 112)	Quality Assessment Tool For Quantitative Studies
Hall (2008). Painting together: An art therapy approach to mother-infant relationships.	72	96	
Hosea (2017). Amazing Mess: Mothers get in touch with their infants through the vitality of painting together.	74	99	
Parashak (2008). Object relations and attachment theory: Creativity of Mother and Child in the Single Parent Family.	60	80	
Proulx (2000). Container, contained, containment: group art therapy with toddlers 18 to 30 months and their parent.	69	85	
Proulx (2002). Strengthening ties, parent-child-dyad: group art therapy with toddlers and parents.	82	101	
Proulx (2003). Strengthening emotional ties through parent-child dyad art therapy: interventions with infants and preschoolers.	78	104	
Meyerowitz-Katz (2017). The crisis of the cream cakes: An infant's food refusal as a representation of intergenerational trauma.	81	100	
Hosea (2006). "The Brush's Footmarks": Parents and infants paint together in a small community art therapy group.	99	99	
Hosea (2011). The brush's foot marks: Researching a small community art therapy group.	101	101	
Armstrong, Dalinkeviciute, & Ross (2019) A Dyadic Art Psychotherapy Group for Parents and Infants – Piloting Quantitative Methodologies for Evaluation	81	100	Weak
Armstrong & Howatson (2015). Parent-infant art psychotherapy: a creative dyadic approach to early intervention.	94	100	Weak
Arroyo & Fowler (2013). Before and after: A mother and infant painting group.	80	98	Weak
Black, Ellis, Harris, Rooke, Slater,& Cuch (2015). Making it Together: An evaluative study of Creative Families an arts and mental health partnership between the South London Gallery and the Parental Mental Health Team.	94	100	Weak
Lavey-Khan & Reddick (2018). Painting Together: A Dyadic Art Therapy Group. Unpublished manuscript. Hertfordshire Partnership University NHS Foundation and Islington Council Early Years Education.	85	105	Weak